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ABSTRACT

Four kinds of measures of excellence are currently used in evaluating vocational education: components and process, occupational impact, equity, and individual student development. None of them displays the kind of precision that characterizes measures in the physical sciences. Furthermore, the nature of the enterprise to which these measures must be applied--vocational education--presents complications. Vocational education is not a single, homogeneous program, but many programs with differing purposes offered in various types of institutions. A further problem is that some of these measures are more pertinent for some varieties of vocational education than others. In addition, no general agreement exists on how the weighting of measures of excellence must be done. To achieve relevance, a notion included in excellence, vocational education also must adapt to the "dimensions of change"--technological, economic, and demographic. Vocational educators have identified areas where program improvement efforts might best be concentrated. Problems that will affect the extent to which the excellence of vocational programs can be enhanced include the need for better evaluation; choice of precedence of program improvement actions; roles of federal, state, and local agencies; and obtaining of accurate, usable manpower demand data for program planning. (YLB)

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VOCATIONAL EDUCATION AND EXCELLENCE FOR THE 1980S:

CHALLENGES, RESPONSES, AND ISSUES

PRESENTED TO THE NATIONAL COMMISSION ON EXCELLENCE

BY

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U.S. DEPARTMENT OF EDUCATION
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DENVER, COLORADO

SEPTEMBER 16, 1982

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VOCATIONAL EDUCATION AND EXCELLENCE FOR THE 1980S: CHALLENGES, RESPONSES, AND ISSUES

Robert M. Worthington, Ph.D.

BEFORE EMBARKING ON MY SUBJECT, VOCATIONAL EDUCATION AND EXCELLENCE FOR THE 1980S: CHALLENGES, RESPONSES, AND ISSUES, I WISH TO EXPRESS MY SINCERE PLEASURE AT BEING GIVEN THE OPPORTUNITY TO ADDRESS SECRETARY BELL'S NATIONAL COMMISSION ON EXCELLENCE IN EDUCATION. ALL OF US IN THE EDUCATION DEPARTMENT HAVE HIGH HOPES CONCERNING WHAT YOU WILL PRODUCE.

WHEN ANNE CAMPBELL ASKED ME TO MAKE THIS PRESENTATION, SHE MENTIONED THE TOPIC AS BEING "EDUCATION AND WORK." ON THE ASSUMPTION THAT YOU WILL BE HEARING FROM OTHERS ON THIS BROAD SUBJECT, I DECIDED TO NARROW IT FOR MYSELF -- TO THOSE PROGRAMS AND ACTIVITIES WITH WHICH WE DEAL IN THE OFFICE OF VOCATIONAL AND ADULT EDUCATION. OTHERWISE, I DO NOT THINK IT POSSIBLE TO AVOID BOTH LONG-STANDING PHILOSOPHICAL ISSUES (WHICH WILL ALWAYS HAVE COMMITTED PROPONENTS ON BOTH SIDES, AND WHICH WILL PROBABLY NEVER BE RESOLVED) AND EXCURSIONS INTO THE REALM OF SO-CALLED "MANPOWER POLICY." BY THIS, I MEAN THE VARIOUS SCHEMES FOR PLANNING, FUNDING, AND OPERATING THE EDUCATION-AND-WORK RELATIONSHIP, ON A NATIONAL BASIS, AS IS OCCURRING IN WEST GERMANY AND JAPAN, FOR EXAMPLE.

IN A HIGHLY PLURALISTIC AND COMPETITIVE SOCIETY SUCH AS OURS, I DOUBT SERIOUSLY WHETHER ANY SUCH GRANDIOSE APPROACH COULD EVER BE NEGOTIATED, LET ALONE PRACTICABLE. I WOULD FAR PREFER TO SPEND MY TIME ON THE INSTRUCTIONAL PROGRAMS, THEMSELVES, AND ON PRACTICAL WAYS IN WHICH TO IMPROVE THEM. IN THIS, I AGREE COMPLETELY WITH JIM HARVEY OF YOUR STAFF, WHO WAS RECENTLY QUOTED AS SAYING THAT, "THE (COMMISSION'S) REPORT WILL BE SHORT ON THEORY. THE COMMISSION IS LOOKING FOR PRACTICAL LEVERAGE POINTS." MY PURPOSE, IN THIS ADDRESS, IS TO SUGGEST WHAT SOME OF THESE POINTS MIGHT BE; BUT, ALSO, TO DISCUSS SOME OF THE COMPLEXITIES

WE FACE IN ARRIVING AT THEM, IN THE MULTI-FACETED, MULTI-INSTITUTIONAL WORLD OF MODERN VOCATIONAL EDUCATION. I WISH I COULD SAY SOME MAGIC WORDS TO MAKE THIS TASK SIMPLE, BUT I EXPECT TO ACHIEVE EXACTLY THE OPPOSITE. HOWEVER, WHEN I FINISH, YOU AT LEAST WILL HAVE A BETTER GRASP OF THE DIFFICULT PROBLEMS THAT VOCATIONAL ADMINISTRATORS FACE -- AT EVERY LEVEL -- IN TRYING TO DECIDE WHERE AND HOW TO STRIVE FOR "EXCELLENCE" IN THEIR PROGRAMS.

MY FIRST TASK IS TO PLACE MY CHOSEN FOCUS FOR BOTH VOCATIONAL EDUCATION AND EXCELLENCE IN CONTEXT. WITH REGARD TO BOTH TERMS, I MUST SACRIFICE SCOPE AND SOME VERY INTERESTING HISTORICAL LINEAGE, IN RETURN FOR SPECIFICITY. AT LEAST AS FAR AS VOCATIONAL EDUCATION IS CONCERNED, THE BACKGROUND PAPER ON "EDUCATION AND WORK" THAT I AM DISTRIBUTING TO YOU MAY FILL SOME OF THESE GAPS.

VOCATIONAL EDUCATION -- DEFINED AS BEING A SERIES OF ORGANIZED EXPERIENCES CALCULATED TO PREPARE AN INDIVIDUAL FOR EITHER PAID OR UNPAID EMPLOYMENT IN SOME RECOGNIZED OCCUPATION -- IS BUT ONE AVENUE FOR "HUMAN RESOURCE DEVELOPMENT", AS IS EDUCATION ITSELF. IF WE WERE CONCERNED WITH ALL ASPECTS OF "HUMAN RESOURCE DEVELOPMENT", WE WOULD HAVE TO INCLUDE NOT ONLY PURELY TRAINING PROGRAMS SUCH AS THOSE CONDUCTED BY INDUSTRY, BUT ALSO THE USE OF LIBRARIES, THE EDUCATIVE EFFECTS OF COMMUNITY ACTION GROUPS, AND THE INDIRECT IMPACT OF HEALTH AND WELFARE PROGRAMS, AMONG OTHER FACTORS; AND, OF COURSE, WE WOULD BE LOOKING AT THE TOTAL SPECTRUM OF FORMAL EDUCATION, FROM KINDERGARTEN THROUGH THE POST-DOCTORAL LEVEL.

IN CONTRAST, THE VOCATIONAL EDUCATION OF WHICH I SPEAK, TODAY, BEGINS WITH PRE-VOCATIONAL INDUSTRIAL ARTS AND WITH CONSUMER AND HOMEMAKING EDUCATION AT ABOUT THE SIXTH GRADE; AND ENDS SHORT OF THE BACCALAUREATE DEGREE, WITH THE EXCEPTION OF PREPARING VOCATIONAL TEACHERS, COUNSELORS, RESEARCHERS, AND ADMINISTRATORS. IT IS IMPORTANT TO NOTE, HOWEVER, THAT FEDERAL, STATE, AND

LOCAL MONIES, UNDER THE CURRENT VOCATIONAL EDUCATION ACT, CAN BE EXPENDED ON GUIDANCE AND COUNSELING FOR VOCATIONAL EDUCATION, AT ALL LEVELS. BUT, IT IS EQUALLY IMPORTANT TO NOTE THAT VOCATIONAL EDUCATION HAS NO RESPONSIBILITY FOR SUBJECT MATTER IN THE CRUCIALLY IMPORTANT LOWER GRADES -- FOR EXAMPLE, THE AMOUNT AND KIND OF MATHEMATICS AND SCIENCE THAT IS TAUGHT -- NOR IS VOCATIONAL EDUCATION A MANDATORY PART OF ANY CURRICULUM, EITHER FROM THE STUDENT'S OR THE SCHOOL SYSTEM'S POINT OF VIEW.

IT MAY ALSO HELP TO ORIENT YOU TO KNOW THAT THE TOTAL EXPENDITURE ON PUBLIC VOCATIONAL EDUCATION, ALONE, IS ABOUT $6.5 BILLION PER YEAR, COMPARED TO $10 BILLION SPEND BY THE MILITARY SERVICES ON EDUCATION AND TRAINING, AND ROUGHLY $35 BILLION BY PRIVATE BUSINESS AND INDUSTRY. OF COURSE, MUCH OF THE MILITARY TRAINING BUDGET IS SPENT ON STRICTLY MILITARY "OCCUPATIONS", WHILE MUCH OF THE PRIVATE-SECTOR BUDGET INVOLVES ADVANCED TRAINING FOR EXECUTIVES. MY POINT IS THAT VOCATIONAL EDUCATION IS A MOST SIGNIFICANT VEHICLE FOR PREPARING THE NATION'S SKILLED WORKERS AND TECHNICIANS, AS WELL AS FOR OFFERING AN ALTERNATIVE KIND OF EDUCATION FOR APPROXIMATELY ONE-THIRD OF ITS SECONDARY STUDENTS.

I WOULD LIKE TO TURN BRIEFLY TO THE QUESTION OF EXCELLENCE. IN THE BROADEST SENSE, THERE ARE PROBABLY AS MANY DEFINITIONS OR "NOTIONS" OF EXCELLENCE AS THERE ARE PHILOSOPHIES OF EDUCATION, EACH OF THESE BEING MEDIATED BY CULTURAL NORMS AND BELIEFS -- OR, MIGHT I ADD, BY PREJUDICES. FOR EXAMPLE, WE STILL OCCASIONALLY ENCOUNTER -- EVEN TODAY -- THE OLD VICTORIAN ATTITUDE THAT NOTHING THAT INVOLVES GETTING ONE'S HANDS DIRTY DESERVES TO BE CALLED "EDUCATION." I DON'T THINK WE NEED TO ADDRESS SUCH PREJUDICES CONCERNING EXCELLENCE, AS THEY HAVE BEEN THOROUGHLY DISCREDITED BY EDUCATIONAL THINKERS FROM HORACE MANN, THROUGH DEWEY, PROSSER AND CONANT, TO JOHN GARDNER. FURTHERMORE, ARGUING GENERALITIES OR PHILOSOPHIES WILL LIKELY PROVE OF LITTLE HELP IN PINPOINTING

REAL DEFICIENCIES AND SUGGESTING PRACTICAL SOLUTIONS. WE MUST TURN TO THE MATTER OF MEASUREMENT; FOR, AS THE HARVARD PHYSICIST PERCY BRIDGEMAN ONCE SAID, IF YOU CAN'T MEASURE A THING, YOU CAN'T DEFINE IT !

THERE WOULD SEEM TO BE FOUR KINDS OF MEASURES THAT MOST PERSONS CURRENTLY LIKE TO USE IN EVALUATING VOCATIONAL EDUCATION: COMPONENTS AND PROCESS; OCCUPATIONAL IMPACT; EQUITY; AND, INDIVIDUAL STUDENT DEVELOPMENT. EACH OF THESE CARRIES A SET OF CRITERIA, BASED ON SPECIALIZED RESEARCH, AND ACCUMULATED OVER THE YEARS. FOR EXAMPLE, "COMPONENTS AND PROCESS" CRITERIA WOULD INCLUDE ASSESSMENTS OF TEACHER QUALIFICATIONS, ADEQUACY OF SHOP FACILITIES AND EQUIPMENT, AND CURRENCY OF CURRICULUM MATERIALS, TOGETHER WITH THE DEGREE TO WHICH PROVEN INSTRUCTIONAL DEVICES SUCH AS THE "PROJECT METHOD" ARE BEING USED.

"OCCUPATIONAL IMPACT" CRITERIA WOULD INCLUDE PLACEMENT RATES, PAY RATES, AND EMPLOYER EVALUATIONS, AMONG OTHERS -- IN OTHER WORDS, THE TYPE OF ANALYSIS LARGELY FAVORED BY THE LABOR ECONOMISTS FOR WHOM VOCATIONAL EDUCATION SEEMS TO HAVE DEVELOPED A SPECIAL FASCINATION, OVER THE PAST DECADE.

"EQUITY" CRITERIA ARE OF MORE RECENT ORIGIN AND HAVE BEEN GENERATED BY THE SAME CIVIL RIGHTS MOVEMENT THAT LED TO FOUR MAJOR PIECES OF FEDERAL LEGISLATION. IT IS MORE DIFFICULT TO CITE SPECIFIC MEASURES, IN THIS CASE, EXCEPT TO SAY THAT -- FOR A SIGNIFICANT NUMBER OF PERSONS WHO NOW "TRACK" THE VOCATIONAL EDUCATION ENTERPRISE, NO PROGRAM COULD BE TERMED "EXCELLENT" THAT DOES NOT HAVE SOME PREDETERMINED PERCENTAGE OF WOMEN, MINORITIES, OR HANDICAPPED (AS THE CASE MAY BE). ADMITTEDLY, THESE CRITERIA ARE MORE OFTEN APPLIED TO ENTIRE SYSTEMS THAN TO INDIVIDUAL PROGRAMS, ALTHOUGH EVEN FEDERAL JUDGES HAVE MADE EXCEPTIONS TO THIS RULE.

"INDIVIDUAL STUDENT DEVELOPMENT" CRITERIA -- REFLECTING THE "WHOLE PERSON" CONCEPT OF EDUCATION -- INCLUDE SUCH NON-OCCUPATIONAL MEASURES AS FREQUENCY OF VOTING, INVOLVEMENT IN COMMUNITY AFFAIRS, AND CRIMINAL RECORD, AMONG MANY OTHERS. THIS GROUP OF CRITERIA REMINDS US THAT, WHILE VOCATIONAL EDUCATION PLAYS AN IMPORTANT ROLE IN PURELY SKILL TRAINING AND RETRAINING, IT IS ALSO SECURELY LODGED WITHIN THE OVERALL EDUCATIONAL ENTERPRISE -- PARTICULARLY WHERE SECONDARY DAY-SCHOOL STUDENTS ARE CONCERNED.

WHILE IT IS NOT CENTRAL TO MY DISCUSSION, I SHOULD POINT OUT THAT -- IN NONE OF THESE MEASURES -- ARE WE TALKING ABOUT THE SIMPLE KIND OF PRECISION THAT CHARACTERIZES THOSE IN THE PHYSICAL SCIENCES (FOR EXAMPLE, THE X-RAYING OF METAL TO DETERMINE FATIGUE POINTS). IN A VERY RECENT ARTICLE IN THE AMERICAN VOCATIONAL JOURNAL, DR. CHARLES BENSON OF THE UNIVERSITY OF CALIFORNIA AT BERKELEY TOUCHES ON SOME OF THESE MEASUREMENT PROBLEMS. REGARDING "OCCUPATIONAL IMPACT CRITERIA", FOR INSTANCE, HE NOTES THAT, "IF WE WISH TO MEASURE QUALITY IN TERMS OF STUDENTS' COMPLETIONS AND PLACEMENTS, WE MUST RECOGNIZE THAT THESE DATA ARE VERY IMPERFECTLY REPORTED. THE SAME IS TRUE OF DATA ON EMPLOYERS' OPINIONS OF QUALITY OF TRAINING RECEIVED BY VOCATIONAL GRADUATES. EVEN IF THOSE KINDS OF DATA WERE WIDELY AVAILABLE, IT WOULD BE NECESSARY TO CONTROL FOR CHARACTERISTICS OF ENTERING STUDENTS AND FOR THE STATE OF THE LOCAL LABOR MARKET. THUS, THE EXERCISE IS A REASONABLY COMPLICATED ONE."

EXTENDING PROFESSOR BENSON'S COMMENTS, I WOULD MAINTAIN THAT ALL OF THE CRITERIA I HAVE JUST SUGGESTED FOR MEASURING EXCELLENCE PRESENT SIMILAR COMPLICATIONS. NEXT, I WOULD LIKE TO EXAMINE BRIEFLY THE NATURE OF THE ENTERPRISE TO WHICH WE MUST APPLY THESE MEASURES -- VOCATIONAL EDUCATION.

MANY DISCUSSIONS OF VOCATIONAL EDUCATION (PARTICULARLY THOSE CONCERNING ITS

EFFECTIVENESS) SEEM TO TREAT IT AS A SINGLE, HOMOGENEOUS PROGRAM. IT IS HARDLY THAT; INSTEAD, IT IS MANY PROGRAMS WITH WIDELY DIFFERING PURPOSES RANGING FROM THE CAREER GUIDANCE OR ORIENTATION FUNCTION OF PRE-VOCATIONAL INDUSTRIAL ARTS, AND THE FAMILY-CONSUMER FOCUS OF CONSUMER AND HOMEMAKING EDUCATION, THROUGH THE EXPLORATION AND CLUSTERED SKILLS PREPARATION IN THE HIGH SCHOOL, TO THE HIGH-SKILLS TRAINING AND EDUCATION AT THE POSTSECONDARY LEVEL. IT ALSO CONTAINS SPECIAL EDUCATION FOR THE PHYSICALLY HANDICAPPED, BASIC EDUCATION FOR LIMITED ENGLISH-PROFICIENT ADULTS, AND PRE-ENGINEERING EDUCATION FOR TECHNICIANS, AMONG OTHER SPECIALIZED OFFERINGS -- CLEARLY, AN IMPRESSIVELY BROAD SPECTRUM OF ENDEAVORS. ITS PROGRAM SUPPORT MECHANISMS SIMILARLY COVER A WIDE SPAN, FROM OUTREACH EFFORTS AIMED AT WOMEN RE-ENTERING THE LABOR MARKET IN NON-TRADITIONAL OCCUPATIONS, THROUGH THE HIGHLY SUCCESSFUL STUDENT ORGANIZATIONS SUCH AS THE FUTURE FARMERS OF AMERICA, TO HIGHER EDUCATION INSTITUTIONS FOR TRAINING VOCATIONAL TEACHERS, COUNSELORS, AND ADMINISTRATORS.

FURTHER, VOCATIONAL EDUCATION IS OFFERED IN AN ALMOST BEWILDERING ARRAY OF INSTITUTIONS, EACH TYPE WITH ITS OWN APPROACH, STRUCTURE, FUNDING MECHANISMS, LEGAL POWERS, AND OTHER CHARACTERISTICS. ACCORDING TO OUR LATEST DATA, THIS ARRAY INCLUDES: 15,729 PUBLIC COMPREHENSIVE OR VOCATIONAL HIGH SCHOOLS; 1,395 PUBLIC AREA VOCATIONAL CENTERS; 586 PRIVATE SECONDARY SCHOOLS; 812 PUBLIC NONCOLLEGIATE POSTSECONDARY INSTITUTIONS; 6,813 PRIVATE NONCOLLEGIATE POSTSECONDARY INSTITUTIONS; 1,135 2-YEAR INSTITUTIONS OF HIGHER EDUCATION (SUCH AS COMMUNITY COLLEGES AND TECHNICAL INSTITUTES); 647 4-YEAR INSTITUTIONS OF HIGHER EDUCATION (WHICH OFFER LESS THAN BACCALAUREATE PROGRAMS); 553 STATE CORRECTIONAL FACILITIES; AND, 83 CORRESPONDENCE SCHOOLS.

NOW, I HAVE RISKED CONFUSING YOU WITH THIS MASS OF FACTS ONLY TO IMPRESS ON YOU THAT THE TARGET OF OUR "EXCELLENCE MEASURES" IS PERHAPS EVEN MORE COMPLEX

THAN THE MEASURES THEMSELVES. HAVING RECOGNIZED THIS, WE ARE FACED WITH A FURTHER PROBLEM; NAMELY, THAT SOME OF THESE MEASURES ARE MORE PERTINENT FOR SOME VARIETIES OF VOCATIONAL EDUCATION THAN FOR OTHERS. FOR EXAMPLE, WHILE "OCCUPATIONAL IMPACT"--USUALLY MEASURED BY PLACEMENT RATES -- IS RELEVANT FOR THOSE SECONDARY VOCATIONAL STUDENTS WHO ARE COMPLETELY SURE HOW THEY ARE GOING TO BE EMPLOYED AND WHO DEFINITELY ARE NOT GOING ON TO HIGHER EDUCATION, IT IS ALMOST A NON-RELEVANT MEASURE FOR ASSESSING THE WORTH OF WHAT WE CALL USEFUL CONSUMER AND HOMEMAKING EDUCATION PROGRAMS, AS OPPOSED TO THE "GAINFUL" VARIETY. ON THE OTHER HAND, SUCH A MEASURE WOULD SEEM TO BE CRITICALLY IMPORTANT IN POSTSECONDARY TECHNICAL EDUCATION, WHERE HIGHLY MOTIVATED AND ABLE STUDENTS ENROLL TO GAIN THE SKILLS AND KNOWLEDGES THAT ARE VERY SPECIFIC TO THEIR CHOSEN FIELDS.

TURNING TO THE "COMPONENT/PROCESS" KIND OF CRITERIA -- SPECIFICALLY, THE MATTER OF UP-TO-DATE EQUIPMENT -- I WOULD JUDGE THIS TO BE MORE IMPORTANT IN POSTSECONDARY TECHNICAL EDUCATION (FOR THE SAME REASONS) THAN I WOULD FOR SECONDARY-LEVEL "OCCUPATIONAL CLUSTER" KINDS OF PROGRAMS WHERE PROCESS IS PERHAPS MORE IMPORTANT. REGARDING "EQUITY" CRITERIA, IT WOULD SEEM OBVIOUS THAT THIS KIND OF MEASURE WOULD BE FAR MORE PERTINENT FOR SECONDARY DAY-SCHOOL PROGRAMS -- WHERE SCHOOL ATTENDANCE IS MANDATORY -- THAN IT WOULD BE FOR RETRAINING THE UNEMPLOYED IN A PARTICULAR INDUSTRY, IN WHICH CASE THE STUDENT POPULATION IS ALREADY DETERMINED BY CIRCUMSTANCES.

IN ALL OF THESE CASES, THE WAY MEASURES OF EXCELLENCE ARE APPLIED MUST, EITHER OBJECTIVELY OR SUBJECTIVELY, INVOLVE WEIGHTING. UNFORTUNATELY, THERE IS NO GENERAL AGREEMENT ON HOW THIS WEIGHTING IS TO BE DONE; AND THIS KIND OF DECISION IS MOSTLY MADE ON OTHER GROUNDS, INCLUDING POLITICAL ONES. NOW, THIS SITUATION POSES SEVERE PROBLEMS FOR ADMINISTRATORS TRYING TO DECIDE WHERE

PROGRAM IMPROVEMENT EFFORTS SHOULD BE DIRECTED, AND FOR EXTERNAL EVALUATORS WHO ATTEMPT TO ASSESS THE "WORTH" OF VOCATIONAL EDUCATION PROGRAMS -- JUST AS IT WILL FOR YOU, IN MAKING YOUR RECOMMENDATIONS, NEXT SPRING. USING A SINGLE CRITERION FOR MANY DIFFERENT KINDS OF VOCATIONAL PROGRAMS "LUMPED TOGETHER" OR USING AN INAPPROPRIATE CRITERION FOR A SINGLE PROGRAM CAN RESULT IN MISLEADING CLAIMS AS TO PROGRAM QUALITY, OR TO INEFFECTUAL CORRECTIVE ACTIONS AIMED AT ACHIEVING EXCELLENCE.

SO FAR, IN MY DISCUSSION, I HAVE TREATED THE VARIOUS POSSIBLE MEASURES OF EXCELLENCE WITHOUT REGARD TO THE TIME FACTOR -- AS THOUGH, ONCE WE HAD DEVELOPED A VALID MEASURE, IT WOULD REMAIN SO, FOR AN EXTENDED PERIOD. THIS MAY HAVE BEEN TRUE, YEARS AGO -- BUT NOT NOW. EACH ONE OF US KNOWS PROGRAMS THAT, BY CONSENSUS, WERE JUDGED EXCELLENT A DECADE AGO, BUT ARE NOW OBVIOUSLY OUT OF DATE AND A WASTE OF EVERYONE'S TIME AND MONEY. THEY SIMPLY HAVE NOT ADAPTED TO CHANGE -- CHANGE IN THE POPULATIONS TO BE SERVED, CHANGE IN THE NEEDS OF BUSINESS AND INDUSTRY FOR SKILLED WORKERS, AND CHANGE IN THE NATION'S WORLDWIDE REQUIREMENTS.

FOR EXAMPLE, VOCATIONAL EDUCATORS STILL PROUDLY RECALL THEIR EXCELLENT EFFORTS IN TRAINING 7,500,000 SKILLED WORKERS FOR DEFENSE INDUSTRIES AND THE MILITARY, DURING WORLD WAR II. AS RECENTLY AS FIVE YEARS AGO, THIS FOCUS ON DEFENSE PREPAREDNESS WOULD NOT, IN AND OF ITSELF, HAVE GIVEN A PROGRAM ANY SPECIAL CLAIM TO EXCELLENCE. HOWEVER, WORLD TENSIONS HAVE AGAIN INCREASED, THE PUBLIC'S MOOD HAS CHANGED, AND A NEW ADMINISTRATION NOW MAKES OUR MILITARY STRENGTH ITS HIGHEST PRIORITY. OBVIOUSLY, UNLESS VOCATIONAL EDUCATION SHIFTS ITS PRIORITIES TO MEET THIS CHALLENGE -- AS IT HAS BEEN DOING -- ANY CLAIM TO EXCELLENCE WOULD HAVE A HOLLOW RING, INDEED.

WHAT, THEN, ARE THE "DIMENSIONS OF CHANGE" TO WHICH VOCATIONAL EDUCATION MUST ADAPT, THAT IN THEMSELVES ALTER THE MEANING OF EXCELLENCE? I FIND IT CONVENIENT TO GROUP THEM INTO THREE CATEGORIES: TECHNOLOGICAL; ECONOMIC; AND, DEMOGRAPHIC.

UNDER TECHNOLOGICAL CHANGE, WE ARE EXPERIENCING A STARTLING ACCELERATION IN THE MODIFICATION OF OLD TECHNOLOGIES, AS WELL AS THE INTRODUCTION OF COMPLETELY NEW ONES. TERMS SUCH AS "MICRO-MINIATURIZATION", "ROBOTICS", "FIBER OPTICS", "BIO-ENGINEERING", AND "LASER COMMUNICATIONS" ARE BECOMING PART OF OUR LANGUAGE, IF NOT YET HOUSEHOLD WORDS. STILL MORE CHANGES WILL COME AS EXPECTED INCREASES IN PRIVATE-SECTOR INVESTMENT IN RESEARCH AND DEVELOPMENT OCCUR. WHAT THIS MEANS IS THAT THE CORRESPONDING RATE AT WHICH SKILLS IN MANY FIELDS BECOME OBSOLETE IS ALSO INCREASING. THEREFORE, WE MUST DEVOTE OUR ATTENTION NOT ONLY TO PREPARING NEW WORKERS AT HIGHER SKILL LEVELS, BUT ALSO TO RETRAINING HUNDREDS OF THOUSANDS OF EXPERIENCED WORKERS WHO FACE STRUCTURAL UNEMPLOYMENT.

UNDER ECONOMIC CHANGE, WE HAVE THE PROBLEMS OF OVERALL LOW PRODUCTIVITY; DETERIORATING COMPETITIVE POSITION IN MANY MANUFACTURING INDUSTRIES SUCH AS STEEL, SHIPBUILDING, AND PRODUCTION ELECTRONICS; AGING AND INEFFICIENT PLANTS; AN ABNORMALLY HIGH REAL INTEREST RATE; AND RESIDUAL INFLATION. A RECENT ARTICLE IN U. S. NEWS AND WORLD REPORT (SEPTEMBER 13, 1982) MAINTAINS THAT THE NATION'S INDUSTRY HAS LOST A MILLION JOBS THAT WILL NEVER COME BACK, IN SUCH MAJOR "BLUE COLLAR" FIELDS AS AUTOMOBILE MANUFACTURE AND GARMENTMAKING. ONCE AGAIN, TECHNOLOGICAL CHANGE IS AN IMPORTANT FACTOR IN THIS ECONOMIC CHANGE. FOR EXAMPLE, THE ARTICLE CITES A RECENT STUDY BY CARNEGIE-MELLON UNIVERSITY WHICH PREDICTS THAT, "BY THE YEAR 2000, ROBOTS WILL SUPPLANT 3 MILLION FACTORY WORKERS AND, BY 2025, COULD BE HANDLING ALL MANUFACTURING CHORES." THE ARTICLE GOES ON TO SAY THAT MANY MIDDLE-AGED, SKILLED, BUT UNEMPLOYED, WORKERS ARE HAVING SEVERE

PROBLEMS FINDING NEW JOBS AND ARE INCREASINGLY SEEKING RETRAINING AS THE ANSWER. THIS HAS DISTINCT IMPLICATIONS FOR VOCATIONAL EDUCATION; BUT IT IS GRATIFYING TO NOTE THAT THE ARTICLE GOES ON TO STATE THAT, "PUBLIC SCHOOLS IN MANY COMMUNITIES ARE REVIEWING COURSE OFFERINGS IN ORDER TO PREPARE STUDENTS FOR AVAILABLE JOBS.....NEW HAMPSHIRE, FOR EXAMPLE, HAS OPENED 12 NEW VOCATIONAL HIGH SCHOOLS OVER THE PAST DECADE AND PLANS TO OPEN SEVEN MORE IN THE NEXT FOUR YEARS -- ALL GEARED TO PROVIDING WORKERS FOR THE ELECTRONICS AND OTHER GROWTH INDUSTRIES." CLEARLY, ADDRESSING THE NEEDS OF THE ECONOMY HAS BECOME AN ALMOST PARAMOUNT FACTOR IN ACHIEVING EXCELLENCE IN VOCATIONAL EDUCATION, FOR THE FORESEEABLE FUTURE. HOWEVER, TRANSLATING THIS GENERALITY INTO OPERATIONAL PLANS RAISES A PLANNING PROBLEM THAT I WILL DISCUSS IN MY CONCLUDING REMARKS.

UNDER DEMOGRAPHIC CHANGE, WE HAVE THE OVERALL AGING OF THE NATION'S WORKFORCE; A PROJECTED DECREASE IN THE PERCENTAGE OF THE WORKFORCE COMPOSED OF YOUTH (BUT AN INCREASE WITHIN THAT AGE BRACKET OF MINORITIES); AN OUTMIGRATION OF SKILLED WORKERS FROM THE "FROST BELT" TO THE "SUN BELT"; A TENDENCY FOR ADULTS TO REMAIN IN THE WORKFORCE LONGER AND TO OPT FOR LATER RETIREMENT; A CONTINUED INFLUX OF WOMEN INTO THE WORKFORCE, PARTICULARLY INTO NON-TRADITIONAL OCCUPATIONS; AN INCREASINGLY MOBILE WORKFORCE; AND, A CONTINUING CONCENTRATION OF POOR, UNSKILLED OR LOW-SKILLED WORKERS IN DENSELY POPULATED URBAN AREAS. RECENT DATA ALSO INDICATE THAT, RELATIVELY SPEAKING, THE RURAL POOR ARE IN EVEN MORE DIFFICULT STRAITS THAN A DECADE AGO. HERE AGAIN, THERE ARE STRONG IMPLICATIONS FOR VOCATIONAL EDUCATION DURING THE 1980S. FOR EXAMPLE, WHILE YOUTH UNEMPLOYMENT STILL CONSTITUTES A SEVERE PROBLEM, IT MAY WELL BE AUTOMATICALLY EASED AS THE SUPPLY OF NEW LABOR DWINDLES. THIS, HOWEVER, WILL NOT CHANGE THE FACT THAT WE WILL STILL BE SHORT OF WORKERS WITH THE RIGHT KINDS OF SKILLS. FOR THIS REASON, I WOULD NO LONGER TERM A PROGRAM "EXCELLENT" -- REGARDLESS OF ITS OTHER MERITS -- UNLESS ITS ADMINISTRATORS WERE NOW BEGINNING TO SEARCH FOR WAYS TO DEVOTE A

SIGNIFICANT PORTION OF ITS RESOURCES TO ADULT RETRAINING. FOR THE SAME REASON -- ALTHOUGH THERE ARE OTHER REASONS IN THE "EQUITY" ARENA -- I WOULD NO LONGER JUDGE A PROGRAM TO BE ECONOMICALLY REALISTIC, LET ALONE "EXCELLENT", IF IT DID NOT MAKE EVERY EFFORT TO SERVE WOMEN, MINORITIES, AND THE HANDICAPPED.

ALL OF THESE CHANGES MUST BE ACCOMMODATED BY VOCATIONAL EDUCATION IF IT IS TO ACHIEVE "EXCELLENCE" -- WHICH, AS A PART OF ITS DEFINITION, MUST INCLUDE THE NOTION OF "RELEVANCE."

NOW THAT I HAVE SPENT CONSIDERABLE TIME ANALYZING THE CONCEPT OF "EXCELLENCE" AND ITS INTERACTION WITH THE FIELD OF VOCATIONAL EDUCATION -- AND HAVE SPENT STILL MORE TIME IN RELATING "EXCELLENCE" TO VARIOUS KINDS OF CHANGES THAT ARE OCCURRING IN THE "OUTSIDE WORLD"-- I WOULD EXPECT YOU TO ASK HOW WE ARE USING THESE INSIGHTS. WHAT HAVE WE CONCLUDED ABOUT WHICH PROGRAM IMPROVEMENTS ARE NEEDED; AND, HAVE WE DEVELOPED ANY SYSTEMATIC WAY OF REACHING SUCH DECISIONS?

LET ME REPLY TO THE SECOND PART OF THAT QUESTION, FIRST. WE SIMPLY DO NOT HAVE ANY SUCH SYSTEM FOR DECISION-MAKING IN PROGRAM IMPROVEMENT. WHAT WE DO DERIVES FROM CONSIDERABLE EXPERIENCE IN OUR FIELD, FROM CONSTANT DISCUSSION AMONG THE VARIOUS LEVELS, FROM PRESSURES EXERTED BY AN EVER-EXPANDING NUMBER OF SPECIAL-INTEREST ORGANIZATIONS, AND -- AS ONE WOULD EXPECT -- FROM DIRECTIONS SUPPLIED BY OUR ADMINISTRATIONS, WHETHER FEDERAL, STATE, OR LOCAL. AS MUCH AS POSSIBLE, WE DO USE THE LOGICAL CONCEPTS PRESENTED FOR YOUR CONSIDERATION, EARLIER IN THIS ADDRESS, BUT I WOULD BE THE FIRST TO ADMIT THAT THEY HAVE GROWN, EMPIRICALLY, OUT OF LONG EXPERIENCE. THEY WOULD SURELY COME UNDER THE HEADING OF "WISDOM OF THE MARKETPLACE", BUT FALL SHORT OF ANYTHING THAT MIGHT BE TERMED, "SCIENTIFIC MANAGEMENT."

WITH THIS NOT INCONSEQUENTIAL "CAVEAT", LET ME LIST A FEW OF OUR CONCLUSIONS

CONCERNING WHERE VOCATIONAL EDUCATION'S PROGRAM IMPROVEMENT EFFORTS MIGHT BEST BE CONCENTRATED:

- IDENTIFICATION AND DISSEMINATION OF EXISTING EXEMPLARY CURRICULUM MATERIALS;
- IMPROVING TEACHER RECRUITMENT, TRAINING, AND RETENTION AT THE SECONDARY LEVEL, PARTICULARLY IN VOCATIONAL AGRICULTURE AND INDUSTRIAL ARTS;
- EXPANDING SEX EQUITY EFFORTS AND ATTEMPTING TO ACHIEVE MORE EFFECTIVE SERVICES FOR SPECIAL-NEEDS POPULATIONS;
- DEVISING MORE COST-EFFECTIVE METHODS FOR ACQUIRING VERY EXPENSIVE, HIGH-TECHNOLOGY EQUIPMENT FOR THE POSTSECONDARY LEVEL;
- ACHIEVING BETTER ARTICULATION AMONG THE VARIOUS LEVELS AND TYPES OF VOCATIONAL EDUCATION INSTITUTIONS, AND WITH OTHER KINDS OF EDUCATION AND TRAINING;
- IMPROVING THE RELEVANCE OF OCCUPATIONALLY SPECIFIC PROGRAMS BY MORE CLOSELY INVOLVING THE PRIVATE SECTOR IN THEIR PLANNING, OPERATION, AND EVALUATION, ESPECIALLY BY INCREASING THE USE OF COOPERATIVE EDUCATION;
- PLACING ADDED EMPHASIS ON THE RETRAINING OF ADULTS FOR CAREERS THAT OFFER SECURE EMPLOYMENT IN THE FUTURE;
- FINDING AND EMPLOYING MORE EFFECTIVE MEANS FOR IMPROVING PROGRAMS IN BOTH URBAN CENTERS AND IN SPARSELY POPULATED RURAL AREAS;
- FOCUSING EXISTING RESOURCES MORE INTENSIVELY ON NATIONAL NEEDS SUCH AS DEFENSE PREPAREDNESS AND DOMESTIC ENERGY PRODUCTION; AND
- INCORPORATING ENTREPRENEURSHIP EDUCATION INTO ALL VOCATIONAL EDUCATION PROGRAMS.

VOCATIONAL EDUCATION AND EXCELLENCE FOR THE 1980S: CHALLENGES, RESPONSES, AND ISSUES
ROBERT M. WORTHINGTON, PH.D. - SEPTEMBER, 1982

THE TOTAL VOCATIONAL EDUCATION ENTERPRISE -- FEDERAL, STATE, AND LOCAL -- IS RESPONDING TO THESE CHALLENGES; HOWEVER, THERE ARE SEVERAL ASPECTS OF THIS RESPONSE THAT DESERVE YOUR ATTENTION.

FIRST, THESE PRIORITIES WERE NOT INVENTED AT, OR DICTATED TO THE FIELD FROM, THE FEDERAL LEVEL. IN ALMOST ALL MATTERS, LOCAL ADMINISTRATORS SENSE THESE KINDS OF NEW DEMANDS, AND BEGIN TO RESPOND TO THEM, MORE QUICKLY THAN EITHER STATE OR FEDERAL STAFFS; AND, IN THIS ADMINISTRATION'S VIEW, THIS IS AS IT SHOULD BE. ONCE WE -- IN THE OFFICE OF VOCATIONAL AND ADULT EDUCATION -- SENSE THESE LOCAL AND STATE INITIATIVES, WE CAN PROVIDE THE KIND OF LEADERSHIP THAT OFFERS SUPPORTIVE RESEARCH, COORDINATION, AND VARIOUS KINDS OF TECHNICAL ASSISTANCE. WITH THE EXCEPTION OF SOME RECENT EXCURSIONS INTO OVER-ENTHUSIATIC COMPLIANCE MONITORING, THIS KIND OF ROLE IS NOTHING NEW FOR FEDERAL VOCATIONAL EDUCATION OFFICIALS. THEREFORE, WE ARE VERY COMFORTABLE WITH THE FUNCTIONS PROJECTED FOR US UNDER SECRETARY BELL'S FOUNDATION INITIATIVE.

SECOND, WE DO HAVE SOME PROBLEMS IN THE AREA OF DATA-GATHERING. AS YOU KNOW, WE ARE ATTEMPTING TO REDUCE ADMINISTRATIVE BURDENS ON STATES AND LOCALITIES. ONE OF THE MOST PROMISING REFORMS INVOLVES CONTROLLING EXCESSIVE PAPERWORK. HOWEVER, I WILL ADMIT THAT IT IS DIFFICULT TO PROVIDE EFFECTIVE COORDINATION -- LET ALONE, ASSIGN LIMITED DISCRETIONARY FUNDS IN AN INTELLIGENT MANNER -- UNLESS WE KNOW QUITE A BIT ABOUT THE PROGRAMS WE ARE TRYING TO HELP, ESPECIALLY WHERE THEY NEED THIS HELP. TO GIVE YOU A CURRENT EXAMPLE, THE DEPARTMENT OF EDUCATION AND THE DEPARTMENT OF DEFENSE ARE ABOUT TO OFFER A JOINT SEMINAR ON VOCATIONAL EDUCATION AND DEFENSE PREPAREDNESS. MOST OF THIS SEMINAR WILL BE DEVOTED TO PRESENTING EXEMPLARY PROJECTS IN VARIOUS KINDS OF TRAINING THAT ARE RELEVANT TO THE NATION'S DEFENSE EFFORT. WE ASSUMED THAT, ALTHOUGH WE HAD

ONLY ANECDOTAL INFORMATION, SOMEONE ELSE WOULD BE ABLE TO PROVIDE A MORE COMPREHENSIVE LISTING OF THESE PROGRAMS. THIS WAS NOT THE CASE; EVEN THE STATE DIRECTORS OF VOCATIONAL EDUCATION -- HARD-PRESSED TO FULFILL FEDERAL COMPLIANCE REQUIREMENTS AND LOSING STAFF AT AN ALARMING RATE -- OFTEN HAD BUT A SKETCHY KNOWLEDGE OF NEW PROGRAM INITIATIVES BEING GENERATED IN THEIR OWN STATES. I AM QUITE SURE THAT WE WILL ENCOUNTER THE SAME PROBLEM IN ANY OF THE PRIORITY AREAS I HAVE JUST LISTED. CONSEQUENTLY, THERE IS THE EVER-PRESENT DANGER OF "REDISCOVERING THE WHEEL" IN VOCATIONAL EDUCATION.

THIRD, THE STATES ARE UNDERGOING BUDGET CUTS (FOR THE SAME REASONS WE, AT THE FEDERAL LEVEL, NEED TO REDUCE OUR EXPENDITURES) AND WILL UNDOUBTEDLY GIVE PROGRAM MAINTENANCE A HIGHER PRIORITY THAN PROGRAM IMPROVEMENT. EVEN NOW, STATES SPEND A VERY SMALL AMOUNT OF THEIR OWN FUNDS FOR THESE PURPOSES. WE ARE GETTING TO THE POINT WHERE STATES SUCH AS MICHIGAN AND OHIO ARE ABOUT TO DISCONTINUE THEIR SUPPORT OF HIGHER EDUCATION PROGRAMS THAT TRAIN VOCATIONAL EDUCATION PERSONNEL, INCLUDING TEACHERS. SINCE THERE CANNOT BE ANY NEW FEDERAL FUNDING FOR THESE PURPOSES, VOCATIONAL EDUCATION MUST TURN TO NEW RESOURCES. THIS CLEARLY MEANS COMBINING PUBLIC RESOURCES WITH THOSE OF THE PRIVATE SECTOR, AS WELL AS MORE CREATIVE USE OF VOLUNTEER HELP (FOR EXAMPLE, FROM RETIRED TEACHERS, TRADESMEN, AND EXECUTIVES). ONE OF OUR PRIME INITIATIVES, IN MY ASSISTANT SECRETARYSHIP, HAS BEEN THE CREATION OF A "PRIVATE SECTOR TASK FORCE" COMMISSIONED TO ACHIEVE EXACTLY THESE GOALS.

FOURTH, BECAUSE OF OUR LACK OF KNOWLEDGE ABOUT PROGRAM SPECIFICS IN THE FIELD -- AND PARTLY BECAUSE OF OUR UNCERTAINTY REGARDING HOW TO CONSTRUCT THE MATRIX OF "EXCELLENCE" MEASURES VERSUS SPECIFIC VOCATIONAL PROGRAMS, TO WHICH I ALLUDED EARLIER IN THIS ADDRESS -- OUR OFFICE OF VOCATIONAL AND

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ADULT EDUCATION HAS FOUND IT MORE USEFUL TO CONCENTRATE ON RESPONSES TO SOME OF THE NATIONAL NEEDS AND BROAD AREAS OF CHANGE THAT I HAVE MENTIONED. WHILE I DO NOT THINK YOU SHOULD CONCENTRATE ESPECIALLY ON VOCATIONAL EDUCATION AT THE FEDERAL LEVEL, YOU SHOULD BE AWARE OF SOME THINGS WE ARE DOING, BEFORE YOU MAKE YOUR RECOMMENDATIONS. LET ME LIST SOME OF OUR INITIATIVES AND OTHER EFFORTS. THEY INCLUDE:

- TASK FORCES IN DEFENSE PREPAREDNESS, HIGH-TECHNOLOGY, AND ENTREPRENEURSHIP -- IN ADDITION TO THE ONE ON THE PRIVATE SECTOR THAT I HAVE ALREADY DESCRIBED;
- A CONTRACT WITH A PRIVATE FIRM TO DETERMINE THE SPECIFIC IMPLICATIONS OF NEW TECHNOLOGY FOR VOCATIONAL PROGRAMS;
- A CONTRACT WITH THE NATIONAL ACADEMY OF SCIENCES TO INVESTIGATE WAYS IN WHICH VOCATIONAL EDUCATION CAN ASSIST WITH BOTH INNER-CITY AND RURAL PROBLEMS;
- SUPPORT OF "STANDARDS OF EXCELLENCE" PROJECTS CONDUCTED BY PRACTITIONERS IN THE FIELD; ONE OF WHICH, IN INDUSTRIAL ARTS, HAS BEEN COMPLETED AND IS BEING PUT TO WIDE USE;
- RECENT COMPLETION AND ON-GOING DISSEMINATION OF A PROJECT FOCUSING ON PRACTICAL METHODS FOR ACHIEVING INDUSTRY-EDUCATION-LABOR COLLABORATION;
- IMPROVING AN EXISTING SYSTEM FOR CONVERTING MILITARY CURRICULA FOR VOCATIONAL EDUCATION'S USE, AND SUPPORTING THE DISSEMINATION OF THESE MATERIALS; AND
- CONTINUING SUPPORT FOR SIX REGIONAL CURRICULUM COORDINATION CENTERS.

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I WOULD NEXT LIKE TO SHARE WITH YOU WHAT WE PERCEIVE TO BE UNDERLYING PROBLEMS OR ISSUES THAT, OVER THE LONG RUN, WILL GREATLY AFFECT THE EXTENT TO WHICH ALL CONCERNED CAN ENHANCE THE EXCELLENCE OF VOCATIONAL PROGRAMS. WE ARE ALREADY CONDUCTING SERIOUS DISCUSSIONS WITH STATE AND LOCAL LEADERS ON THESE MATTERS; AND WILL, OF COURSE, APPRECIATE WHATEVER SUGGESTIONS YOU MAY GIVE US. THESE ARE THE QUESTIONS WE ARE PONDERING, TOGETHER WITH A FEW EXPLANATORY COMMENTS:

- HOW CAN WE EVALUATE OUR PROGRAMS IN SUFFICIENT SCOPE AND DEPTH SO AS TO REALLY KNOW WHERE THEIR STRENGTHS AND WEAKNESSES LIE ?

THIS IS ACTUALLY A TWO-FOLD PROBLEM: FIRST, IT INVOLVES RESEARCH, UNPERFORMED TO DATE, ON HOW TO ACHIEVE THE WEIGHTING OF "EXCELLENCE MEASURES" FOR THE MANY DIFFERENT VOCATIONAL PROGRAMS (AS WE HAVE ALREADY MENTIONED); SECOND, GIVEN THE REALITY THAT WE HAVE NOT DONE A COMPREHENSIVE JOB OF EVALUATION WHEN WE HAD ALMOST UNLIMITED FUNDS, HOW CAN WE DO THE SAME JOB MORE EFFICIENTLY WITH LESS MONEY?

- HOW CAN SYSTEMATIC DECISIONS BE MADE, ON ANY LEVEL, REGARDING WHICH KIND OF EXCELLENCE SHOULD TAKE PRECEDENCE OVER OTHERS, WHEN TWO OR MORE PROGRAMS ARE BEING CONSIDERED?

EVEN GIVEN THE POSSIBILITY THAT WE CAN CORRECTLY IDENTIFY ALL NEEDED PROGRAM IMPROVEMENT ACTIONS FOR ALL PROGRAMS, IT WILL BE FINANCIALLY IMPOSSIBLE TO ADDRESS ALL OF THESE, SIMULTANEOUSLY. HOW, THEN, DO WE RATIONALLY CHOOSE BETWEEN TWO VALID CHOICES SUCH AS -- LET US SAY -- DEVELOPING MORE EFFECTIVE COOPERATIVE PROGRAMS FOR ADULTS AT THE POSTSECONDARY LEVEL VERSUS IMPROVING VOCATIONAL GUIDANCE AT THE SECONDARY LEVEL?

- WHAT SHOULD BE THE RESPECTIVE ROLES OF THE FEDERAL, STATE, AND LOCAL AGENCIES IN PROGRAM IMPROVEMENT?

THERE ARE MANY DIFFERENT "ACTORS" ON THE STAGE OF PROGRAM IMPROVEMENT, INCLUDING SPECIALIZED FEDERAL STAFF, STATE RESEARCH COORDINATING UNITS, LOCAL CURRICULUM DEVELOPMENT GROUPS (IN THE LARGER DISTRICTS), REGIONAL CURRICULUM COORDINATION CENTERS, THE NATIONAL CENTER FOR RESEARCH IN VOCATIONAL EDUCATION AT THE OHIO STATE UNIVERSITY, OTHER UNIVERSITY CENTERS FOCUSING ON VOCATIONAL EDUCATION -- AND, OF COURSE, MANY PRIVATE FIRMS. TAKEN TOGETHER, ALL OF THIS OPERATES AT WHAT IS PROBABLY A LOW LEVEL OF EFFICIENCY. GIVEN WHAT HAS TO BE ACCOMPLISHED, AND THE LIMITED RESOURCES FOR THIS TASK, HOW CAN THESE ELEMENTS BE ORGANIZED OR USED SO AS TO OPERATE AS A COHERENT SYSTEM? FOR EXAMPLE, SHOULD THE OFFICE OF VOCATIONAL EDUCATION MERELY "STOCK THE SHELVES" WITH RESEARCH PRODUCTS, LEAVING ANY COMPREHENSIVE "USE STRATEGY" STRICTLY TO THE STATES; OR, SHOULD DISCRETIONARY PROGRAMS BE PLANNED JOINTLY BY THE FEDERAL, STATE, AND LOCAL STAFFS IN A MORE TARGETED FASHION? IF SO, HOW CAN WE ACCOMPLISH THIS WHILE PRESERVING STATE PREROGATIVES? AND, FINALLY --

- <u>HOW CAN WE OBTAIN MORE ACCURATE AND USABLE MANPOWER DEMAND DATA FOR THE PLANNING OF SPECIFIC INSTRUCTIONAL PROGRAMS FOR THE FUTURE?</u>

YOU WILL RECALL THAT, EARLIER IN THIS ADDRESS, I CITED A MAGAZINE ARTICLE THAT PAINTED A VERY GLOOMY PICTURE FOR BLUE-COLLAR EMPLOYMENT; AND, BY IMPLICATION, A SIMILARLY GLOOMY PICTURE FOR THE FUTURE OF TRADE AND INDUSTRIAL EDUCATION, A MAJOR SEGMENT OF THE VOCATIONAL EDUCATION ENTERPRISE. FIRST, I MIGHT POINT OUT THAT -- ALTHOUGH I HAVE NO DOUBT ABOUT THE MASSIVE IMPACT OF NEW TECHNOLOGIES -- VOCATIONAL EDUCATION HAS BEEN "BURNED" BEFORE, REGARDING THE RATE AT WHICH NEW KINDS OF JOBS WILL BECOME AVAILABLE. I AM RECALLING PROJECTIONS MADE BY QUALIFIED MANPOWER ECONOMISTS IN THE MID-SIXTIES CONCERNING THE IMMINENT INCREASE IN DEMAND FOR NEW KINDS OF HEALTH TECHNICIANS, FOR OCEANOGRAPHIC TECHNICIANS, AND THE LIKE. SOME OF THIS DEMAND <u>HAS</u> OCCURRED,

BUT NOT NEARLY AS QUICKLY, OR AS OVERWHELMINGLY, AS SOME PREDICTED. I ALSO SEEM TO RECALL THAT THIS SAME MAGAZINE HAS RECENTLY FEATURED ARTICLES ON THE COMING EXPLOSION OF DEMAND FOR HOUSING, AS WELL AS THE NEED TO SPEND HUNDREDS OF BILLIONS OF DOLLARS TO RESTORE OUR NATION'S INFRASTRUCTURE -- ITS ROADS, BRIDGES, AND SEWER SYSTEMS, FOR EXAMPLE. THESE PREDICTIONS GIVE US A COMPLETELY DIFFERENT PICTURE OF THE NEED FOR WORKERS IN THE CONSTRUCTION AND METAL WORKING TRADES, AMONG MANY OTHERS. HOW ARE VOCATIONAL EDUCATORS TO MAKE SENSE OF THESE ALTERNATE FUTURES? INSTALLING NEW PROGRAMS AND DELETING OLD ONES REPRESENT A MAJOR, LONG-TERM FINANCIAL INVESTMENT. ARE THERE WAYS OF DEVELOPING MORE RELIABLE PROJECTIONS; OR, MIGHT THERE BE SOME NEW AND CREATIVE WAYS FOR CIRCUMVENTING THIS PROBLEM?

BEFORE I CLOSE, I BELIEVE THAT THERE IS ONE MORE QUESTION THAT MUST BE ASKED -- AND ANSWERED: <u>WHAT DIFFERENCE DOES IT MAKE WHETHER THIS NATION'S VOCATIONAL EDUCATION PROGRAMS ARE EXCELLENT OR NOT?</u>

IF I HAD THE TIME, I COULD PROBABLY MAKE A FAIRLY CONVINCING CASE (FOR A NON-ECONOMIST) THAT QUALITY VOCATIONAL PROGRAMS WOULD CONTRIBUTE TO A MORE SKILLED WORKFORCE -- WHICH, IN TURN, WOULD AID IN INCREASING PRODUCTIVITY AND REDUCING UNEMPLOYMENT AND INFLATION. OR, IF I CHOSE A VALUES-ORIENTED ARGUMENT, I COULD EXPAND ON THE STATEMENT MADE BY THE HERITAGE FOUNDATION IN ITS <u>MANDATE FOR LEADERSHIP</u>; THAT, "THE PENDING REAUTHORIZATION OF THE VOCATIONAL EDUCATION ACT REPRESENTS STILL ANOTHER OPPORTUNITY TO STRESS TRADITIONAL VALUES (EMPLOYMENT; JOB PREPARATION; PRODUCTIVITY, ETC.)....." TO THIS LIST, I WOULD CERTAINLY ADD THE REINFORCEMENT OF FAMILY VALUES.

BUT I THINK THAT MY MOST EFFECTIVE RESPONSE WILL BE TO TELL YOU ABOUT THREE PROGRAMS, CURRENTLY IN FULL OPERATION, AND LET YOU JUDGE FOR YOURSELVES WHETHER

OR NOT EXCELLENCE IN VOCATIONAL EDUCATION MAKES ANY DIFFERENCE -- TO COMMUNITIES, TO STATES, AND TO THE NATION.

- THE STATE TECHNICAL INSTITUTE AT MEMPHIS, TENNESSEE, IS IN THE THIRD YEAR OF A $13 MILLION CONTRACT TO TRAIN ACTIVE-DUTY AVIATION TECHNICIANS FOR THE UNITED STATED NAVY. IN 1981, THIS PROGRAM TRAINED 15,000 IN THE FUNDAMENTALS OF AVIATION MECHANICS, 9,000 IN BASIC ELECTRICITY AND ELECTRONICS, NEARLY 1,700 AIRCRAFT TECHNICIANS, 1,135 JET TEST MECHANICS, AND 850 AIR TRAFFIC CONTROLLERS. IT HAS BEEN REPEATEDLY COMMENDED BY HIGH-LEVEL NAVY TRAINING OFFICIALS.

- OVER THE PAST FIFTEEN YEARS, SOUTH CAROLINA HAS BUILT A COMPLETELY NEW SYSTEM OF VOCATIONAL SCHOOLS AND TECHNICAL COLLEGES. DURING THIS PERIOD, THE STATE HAS ATTRACTED HUNDREDS OF NEW INDUSTRIES, MANY OF THEM FROM EUROPE. THE VOCATIONAL-TECHNICAL SYSTEM HAS BEEN WIDELY CREDITED, WITHIN SOUTH CAROLINA, FOR MUCH OF THIS GROWTH.

- THE ILLINOIS STATE BOARD OF EDUCATION, IN A CONSORTIUM WITH THE ILLINOIS STATE CHAMBER OF COMMERCE, THE ILLINOIS DEPARTMENT OF COMMERCE AND COMMUNITY AFFAIRS, LOCAL EDUCATIONAL AGENCIES, COMMUNITY GROUPS, AND EMPLOYERS, OFFERS CUSTOMIZED TRAINING UNDER ITS HIGH IMPACT TRAINING SERVICES PROGRAM. BASED ON THE CHAMBER OF COMMERCE'S OWN ANALYSIS, THE INVESTMENT OF $740,385 TO TRAIN AND EMPLOY 1,159 PERSONS, DURING 1981, HAS RETURNED CLOSE TO $57 MILLION TO THE STATE AND INVOLVED COMMUNITIES, IN PERSONAL INCOME, VARIOUS TAXES, AND RETAIL SALES.

I BELIEVE THESE EXAMPLES STRONGLY SUGGEST WHAT THE ANSWER MUST BE TO THE FINAL QUESTION THAT I POSED. OUR EFFORTS TO ACHIEVE EXCELLENCE IN VOCATIONAL

EDUCATION CAN BE WORTHWHILE, AND THE "PAYOFFS" WILL BE SIGNIFICANT -- NOT THE LEAST OF WHICH WILL BE REALIZED BY THE STUDENTS, THEMSELVES, AS THEY GAIN THE SKILLS THAT MAKE POSSIBLE A PRODUCTIVE, SATISFYING LIFE.

THE PATH WE MUST FOLLOW WILL BE DIFFICULT AND IS STREWN WITH THE KIND OF TESTING PROBLEMS THAT I HAVE DISCUSSED WITH YOU, TODAY. HOWEVER, WITH THE AID OF GROUPS SUCH AS YOURS -- BUT ESPECIALLY WITH THE ACTIVE COOPERATION OF THE PRIVATE SECTOR -- I AM CONFIDENT THAT WE WILL SUCCEED.

I AM SURE THAT I SPEAK FOR ALL VOCATIONAL EDUCATORS IN SAYING THAT I, PERSONALLY, WELCOME THE CHALLENGE.

THANK YOU.